

NEW SPECIES FROM TURKEY, ARABIA AND MOROCCO

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ABSTRACT. The following new species are described: *Ajuga arabica* P. H. Davis (Labiatae, Saudi Arabia), *Ajuga relicta* P. H. Davis (Labiatae, Turkey), *Aristolochia krausei* P. H. Davis (Aristolochiaceae, Turkey) and *Senecio maroccanus* P. H. Davis (Compositae, Morocco). Two Canary Island Compositae are recorded from Morocco for the first time: *Asteriscus schultzii* (Bolle) Pitard & Proust, and *Pulicaria burchardii* Hutchinson.

Ajuga arabica P. H. Davis, sp. nov. (Labiatae).

Ab *A. chamaecisto* Gingins ramulis deinde haud spinescentibus, foliis hispidulis, inflorescentibus densis, calyce minori et hispidulo, corolla aurea labio superiore obsolescente sinu cuneato differt. Ab *A. chamaepitys* (L.) Schreber *sensu lato* habitu fruticuloso, foliis et bracteis plerumque elliptico-lanceolatis integris vel dentatis, corolla labio superiore haud bidentato recedit.

Fruticulus 12-30 cm altus, ramis ascendentibus albo-tomentosis, sparse foliosis (folia in aestate mox decidua). *Folia caulina* elliptico-lanceolata, integra vel 1-3-dentata (dentibus obtusis vel acutis) vel 1-2-lobata, pubescentia et patente hispido-hirsuta. *Inflorescentia* terminalis, 5-12 cm longa, inferne \pm laxa, superne densa, verticillastris bifloris. *Folia floralia* (bracteae) ut foliis caulinis plerumque similia, sed elliptica, acuta, calycibus 2-5-plo longiora. *Calyx* 4-7 mm longus, ad medium vel paulo ultra in lacinias lanceolatas hispidulas 5-fidus. *Corolla* aurea, 25-26 mm longa, extus pilosa, tubo 8 mm longo supra medium constricto; labio superiore obsolescente sinu cuneato; labium inferius trilobatum, 17-18 mm longum, in dimidio inferiore subventricosum, ad medium lobis lateralibus 4 mm longis ovato-oblongis obtusis provisum; lobo terminale in dimidio inferiore elongato 12 mm longo, rubro-lineato, supra piloso, in dimidio distale latissime cuneato 10-11 mm lato, lateraliter rotundato, apice emarginato vel retuso. *Stamina* exteriore quam interiora multo longiora. *Stylus* 17-18 mm longus. *Fl.* Mar.-Mai.

Type. Saudi Arabia. Near Khurma, c. 21°55' N, 42°02' E, 9 v 1969, G. Popov 69/204 (holo. BM, iso. E).

SAUDI ARABIA. Khurma, 21°55' N, 42°02' E, 27 v 1972, G. Popov 72/88. Near Mecca, c. 21°26' N, 39°49' E, 23 iii 1969, G. Popov 69/163. 505 km from Jeddah, ? 20°00' N, 42°30' E, *Acacia-Fagonia* community on gravelly soil containing sand, basalt locally reaching surface, a. 1962, W. Zeller 1785 (2 sheets). Near Halima [22°20' N, 41°17' E], vernacular name *Afnun*, 13 viii 1931, H. St. J. Philby.

This distinctive Saharo-Sindian shrublet has been collected mainly in the Hedjaz. Its nearest allies are the shrubby purple-flowered *A. chamaecistus* Gingins (Iran, Transcaucasia, Afghanistan) and the widespread herbaceous yellow-flowered *A. chamaepitys* (L.) Schreber (*sensu lato*) with trifid caudine and floral leaves (bracts). These are placed by Briquet in different subsections of sect. *Chamaepitys* Benthama—a rather heterogeneous assemblage of species. I am indebted to the BM for the loan of the specimens cited above.

***Ajuga relicta* P. H. Davis, sp. nov.**

Species insignis, ab *A. postii* Briq. foliis caulinis basi amplexicaulibus, inflorescentia terminali verticillastris multifloris, calycibus glanduloso-villosis, corolla parva, nuculis rugosis differt.

Herba perennis? *Caules* erecti plus quam 30 cm alti, 2–3 mm lati, quadranguli, superne breviter ramosi. *Folia caulinata* lanceolata, opposita, glabra, ea caulis principalis in petiolo attenuata basi in vaginis triangularibus breviter coalita, ea ramorum axillarium subsessilia 25–50 mm longa basi attenuata. *Inflorescentia* terminalis, spicoida, 8–12 cm longa, axe glanduloso-villoso, verticillastris 6–10, dense 6–12-floribus, praeter infima approximatis; verticillastrata inferiora foliis floralibus lanceolatis sessilibus 3–4-plo longioribus subtenta, verticillastrata superiora brevius bracteata. *Pedicelli* 2–3 mm longi. *Calyx* obconicus, 8–11 mm longus, ad medium in lacinias angustae lanceolatas glanduloso-villosulas 5-fidus. *Corolla* (emarcida) c. 1·6 cm longa, tubo tenui, quam limbo duplo longiore, labio superiore 1 mm longo, ad basin bidentato labio inferiore c. 6 mm longo, lobis lateralibus 0·7 mm longis, lobo terminale (emarcido) ut videtur 2 mm longo. *Nuculae* 3·2 × 1·5 mm, reticulato-rugulosae, ad 3/4 cohaerentes. Type. Turkey. C6 Maraş: Akher Dagh (Ahır Dağ), 6000 ft (1829 m), 17 vii 1907, Haradjian 1573 (holo. W).

An extremely distinct species resembling sect. *Ajuga* (sect. *Bugula* Bentham) in having many-flowered verticillasters, but with no obvious ally in that section. Its nearest relative may possibly be *A. postii* Briq. from the Amanus mountains and Cilicia, another relict species rather unhappily assigned by Briquet to sect. *Chamaepitys* Bentham subsect. *Phleboantheae* Briq. (Engler & Prantl, *Natürl. Pflanzenfam.* 4(3a):210, 1897). The new species is readily distinguished from *A. postii* by its amplexicaul leaf bases, terminal spicoid inflorescence of dense, many-flowered verticillasters (reminiscent of a *Stachys*), smaller long-tubed corolla of very different shape, and dry nutlets (not baccate as in *A. postii*). The type specimen (of which no isotypes could be traced) is poor, with the leaves on the main stem mostly withered (except for the persistent amplexicaul petiole bases), so it is not certain whether all the leaves are entire. The corollas have also withered and their colour is unknown. The species should certainly be searched for in the mountains near Maraş, but the area has been so badly deforested that the species may now be extinct and the above description posthumous. I am indebted to Mr I. C. Hedge for his assistance in investigating the specimen.

***Aristolochia krausei* P. H. Davis, sp. nov. (Aristolochiaceae).**

Affinis *A. guichardii* P. H. Davis & M. S. Khan sed limbo perigonii oblongo (haud late cordato) facile distinguenda.

Radix ignota. *Caules* 15–18 cm, flexuosi, c. 1·5 mm lati, sparse hirtelli. *Folia* orbiculari-cordata, herbacea, (1·5–)2–4 cm longa et lata, apice obtusa, margine haud denticulata, supra asperato-papillosa, infra dense hirtella glaucescentia, basi auriculis rotundatis incurvis provisa; petiolus 3–13 mm. *Flores* solitarii axillares. *Pedunculi* 5–12 mm, hirtelli. *Perigonium* ambitu c. 3·5 cm, extus in sicco olivaceo-purpurascens; utriculus obovato-globosus, 6–9 × 6–8 mm; tubus tenuis sigmoideo-curvatus, ad basin 2·5–3 mm latus, superne sensim ampliatus ad 4–6 mm latus, intus hirtellus; limbus oblongus, 18–20 × 8–10 mm, apice

subemarginatus, basi breviter obtuse auriculatus sinu 2–5 mm profundo. *Ovarium* obovato-clavatum, dense hirtulum. *Capsula* ignota. *Fl.* Mar.–Apr.

Type. Turkey C5 Içel: Limonlu–Sandal Dağı, Karga Kavun, 550 m, 23 iv 1972, *T. Uşlu* (holo. ANK).

TURKEY. C4 Içel: Silifke, 11 iii 1935, *K. Krause* 4709.

A. krausei P. H. Davis is allied to *A. guichardii* P. H. Davis & M. S. Khan from SW Anatolia and Rhodes, differing mainly in its oblong perianth limb. In flower shape this neglected Cilician species is somewhat intermediate between *A. guichardii* and *A. incisa* Duchartre from W Anatolia and Samos; however, the leaves of the latter are very different from both *A. guichardii* and *A. krausei*. On the limited material available, the leaf blade of the new species is somewhat rounder than in *A. guichardii*. The Flora of Turkey area now has 24 species of *Aristolochia* (all herbaceous except for *A. sempervirens* L.), of which half are endemic. The new species is named after its discoverer, who published over a dozen papers on the Turkish flora.

Senecio maroccanus P. H. Davis, sp. nov. (Compositae).

A *S. boissieri* DC. foliis et scapis et involucris subglabris, lamina foliorum viridum elongata pro parte maxima pinnatifida, capitulis radiatis, phyllariis latius purpureo-marginatis differt.

Herba perennis nana caespitosa 1·5–7 cm alta, caudice breviter rhizomatoso. *Folia basalia* linearis-oblanceolata, 1·5–4 cm × 2–5 mm, crassiuscula, viridia, externa integra, ceteris ad medium vel ultra lateraliter dentata vel in lobis oblongis vel oblongo-spathulatis obtusis 0·5–4·5 mm longis sursum pinnatifida. *Caules* 1(–3)-capitati, scapis 1·5–7 cm altis squamis 2–4(–6) mm longis sparsis provisis, squamis supremis capitulum laxe subtentibus. *Phyllaria* 13, oblongo-lanceolata vel interiora ovata, subacuta, basi subtomentella, c. 6 × 1·5–2 mm, uninervia, interiora late membranaceo-marginata purpurascens, omnia apice papillosa. *Flores radiati* feminei ligula obovato-oblonga, 4·5 mm longa, emarginata, tubum aequante; pappus 5 mm longus, setis scabris; ovarium 1 mm longum, subglabrum. *Flores discoidei* corolla tubulosa, 6–6·5 mm longa, lobis triangularibus purpurascens 0·5 mm longis; antherae fere 3 mm longae; stylus ramis 0·5 mm longis; pappus corolla subaequans; ovarium 1 mm longum, papillosum. *Achenia* ignota. *Fl.* Jul.

Type. Morocco. Grand Atlas: Oukaimeden (above Marrakech), near la table d'orientation, 2780 m, local on rocky sandstone slope, 20 vii 1973, *Davis* 55394 (holo. E, iso. BM).

Clearly distinguished from the Spanish *Senecio boissieri* DC. (Sierra Nevada, Sierra de Segura, Picos de Europa) by the characters cited in the diagnosis. That this rare species has been overlooked by earlier collectors may be due to the fact that Oukaimeden has only recently become accessible as a ski resort. *Sempervivum atlanticum* Ball and the curious *Draba hederifolia* Cosson were collected at the same locality.

The following two Compositae, previously considered endemic to the Canary Islands, are apparently recorded from Africa for the first time.

Asteriscus schultzii (Bolle) Pitard & Proust, Isles Canaries: 224 (1909).

Syn.: *Odontospermum schultzii* Bolle in Bonplandia 7:295 (1859).

MOROCCO. Oued Dra, between Goulimine and Tan, 75 m, stony slopes of valley, 30–60 cm shrub, ligules whitish, 23 iii 1969, *Davis* 48595. Oued Chebeika, c. 30 km S of Tan-Tan plage, 50 m, lip of limestone escarpment above oued, perennial, suffrutescent, rays white with purplish-pink reverse, 22 iii 1972, *Davis* 53651.

Previously known only from the islands of Fuerteventura and Lanzarote, where it is apparently rarer than in SW Morocco. The leaves (which do not appear to be fleshy, at least when dried) bear a short asperous indumentum. The Moroccan specimens are larger with more deeply toothed leaves than Bramwell 1633 from Lanzarote. *A. schultzii* may well depend partly on dew for its survival on the brow of the escarpment. I am indebted to Miss A. Wiklund (University of Stockholm) for the identification.

Pulicaria burchardii Hutchinson in Hooker's Ic. Pl. t. 3056 (1916).

MOROCCO. Oued Chebeika, c. 30 km S of Tan-Tan plage, near sea level, in mounds of *Limoniastrum ifniense* (Caball.) Font Quer, shrub 15–30 cm, leaves fleshy, silver-grey, rays gold, local, 22 iii 1972, *Davis* 53640.

This fleshy-leaved halophytic shrub (reminiscent of *Inula crithmoides* L.) has previously been known only from Fuerteventura.